

## REMARKS

Claims 1-5 are pending in the present Application. No claims have been canceled, claims 1, 2, and 5 have been amended, and no claims have been added, leaving Claims 1-5 for consideration upon entry of the present Amendment.

Claims 1, 2, and 5 have been amended to address the Examiner's Objections as discussed in greater detail, below.

In addition, Claim 1 has been amended to include the phrase "to prepare a catalyst powder". Support for this amendment can be found at least in the Specification on p. 7, lines 13-14.

Claim 5 has also been amended to include a limitation to the catalyst surface area. Support for this amendment can be found in Claim 4 as filed.

### Objected-to Claims

Claims 1, 2, and 5 has been amended to correct inadvertent typographical errors. In addition, Claim 1 has been amended to include the term "compound" and remove the phrase "kinds of", and Claim 2 has been amended to recite "drying" step.

No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

### Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 1-5 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner has rejected Claim 1 and dependents for insufficient antecedent basis for "the catalyst powder" recited in the dependent claims. Accordingly, as discussed hereinabove, Claim 1 has been amended to include the antecedent basis for this limitation. Reconsideration and removal of the rejection is respectfully requested.

### Claim Rejections Under 35 U.S.C. § 102(e)/103(a)

Claim 5 stands rejected under 35 U.S.C. § 102(e), as allegedly anticipated by, or in the alternative, under 35 U.S.C. § 103(a), as allegedly unpatentable over, US Patent No. 6,881,702 (“Arnold”). Applicants respectfully traverse these rejections.

To anticipate a claim, a reference must disclose each and every element of the claim. *Lewmar Marine v. Varient Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987).

Arnold discloses a process for preparing a catalyst for gas phase oxidation of organic compounds to alpha-beta unsaturated aldehydes and/or carboxylic acids. Col. 3, lines 20-34.

Arnold discloses and teaches regions of differing chemical composition on multimetal oxide with linear dimensions of 1 to 25 micrometers. Col. 4, lines 13-24. However, Arnold fails to disclose or teach the surface area limitation claimed in instant Claim 5. Thus, Arnold fails to disclose or teach all limitations of the instant claims.

Further, for an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Arnold fails to disclose or teach the surface area limitation of Claim 5. Therefore, Arnold fails to anticipate, or in the alternative, render unpatentable, Claim 5. Reconsideration and allowance are therefore respectfully requested.

#### Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-4 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Arnold taken together with US Patent No. 5,364,522 (“Wang”). Applicants respectfully traverse this rejection.

Wang discloses method for fabricating large scale ceramic films. Col. 2, lines 17-20.

Also for an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai*

*Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Arnold discloses preparing an aqueous solution of the catalyst precursors by preparing a first aqueous solution of bismuth, iron, and cobalt or nickel compounds, and mixing with a second aqueous solution /suspension of molybdenum and silicon or aluminum compounds. Col. 6, lines 1-8. The precursor solution mixture is dried by spray-drying. Col. 6, lines 9-10.

Arnold fails to disclose use of a single solution as claimed in instant Claim 1. In addition, Arnold fails to disclose drying by microwave, as disclosed in instant Claim 1. Arnold thus fails to disclose all elements of instant claim 1 and its dependents. Wang discloses infiltrating ceramic films with boride, carbide, nitride, oxynitride, or silicide. Col. 2, lines 20-22.

Infiltration may be done using a heating means, where the infiltration heating means may be by microwave. Col. 3, lines 8-9; Col. 4, lines 22-23. Wang also discloses heating the clean ceramic precursor films to dry them. Col. 7, lines 19-27. Wang fails to disclose or teach drying particulate catalysts. Further, Wang fails to disclose or teach pulverizing metal oxides after calcining as claimed in instant Claim 1. Thus, Wang fails to disclose or teach all elements of the instant claims. Further, Wang does not disclose or teach particulate catalysts with high surface area. One skilled in the art will appreciate the difference between a ceramic film infiltrated with a non-oxide infiltrating agent, and a particulate catalyst with high surface area as claimed in the instant claims. Neither does Arnold teach application of the process of Arnold to ceramic films, but teaches instead calcining particles blown through a furnace. One skilled in the art will further appreciate that particulate calcined metal oxides and ceramic films are very different materials with different handling and preparation methods. Thus, there is no suggestion or incentive provided in Arnold or Wang that would cause one skilled in the art to modify Arnold with Wang to arrive at the invention as Claimed in Claim 1. In addition, there is no reasonable expectation advanced that combining a method of calcining particulate catalysts in Arnold with a method of drying or infiltrating a ceramic film with one of a number of heating means including microwave would provide the process of making the catalyst as claimed in claim 1. Therefore, the combination of Arnold with Wang fails to disclose or teach the claimed invention. Reconsideration and allowance of the claims is respectfully requested.

It is believed that the foregoing amendments and remarks fully comply with the Office

Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

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